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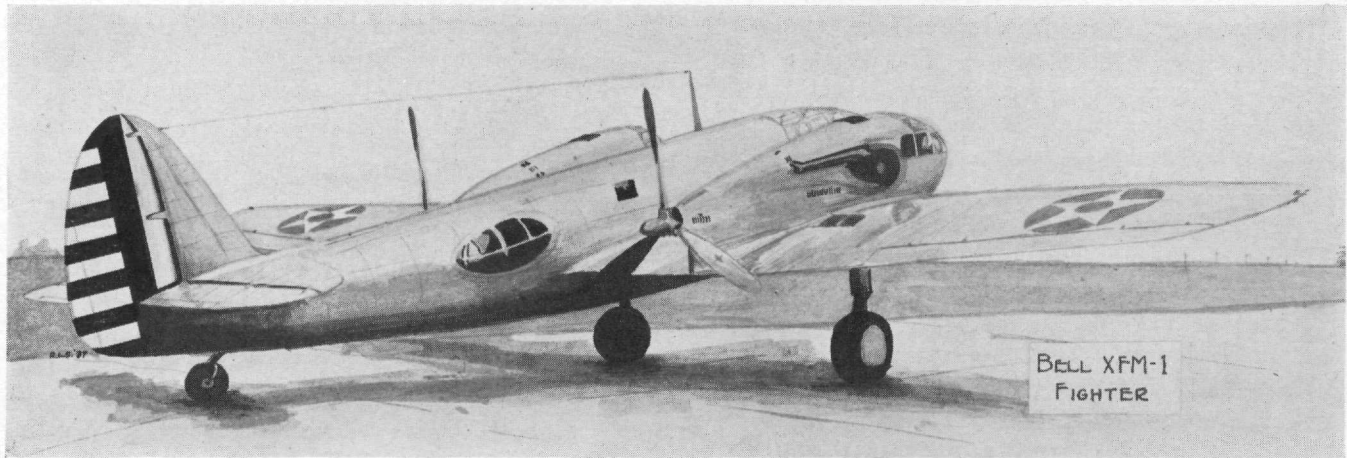
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# THE BELL XFM-1 FIGHTER

By PAUL GUSTAFSON

FROM the days of the World War until recently pursuit ships had all been faster than the large bombing planes. The men who devise our military tactics were entirely satisfied with this condition. Being interested in defense rather than aggression, they wanted pursuit ships capable of intercepting and overtaking any enemy bombers that might approach our shores.

Their feeling of security was greatly disturbed when Glenn L. Martin produced the B-10, a bi-motored, streamlined bombing plane which demonstrated a remarkable tendency to pass any of our pursuit ships that might be in the air. At that time no foreign nation had a ship comparable with the Martin, but everyone realized that they would not be long in following a good example.

Immediately the need for better pursuit ships was announced to the aircraft companies, and several of them responded with faster models, one of which was the Boeing P-26, the first all-metal, low-winged pursuit plane. Although it represented a vast improvement over former designs, the little P-26 was hard-pressed to keep up with the Martin. Improvements came rapidly, however, and the fighters had almost reached their former status with respect to bombers when they received another set-back.

After several years of work, Boeing completed their four-motored bomber, the YB-17, and flew it from the Seattle plant to Wright Field at Dayton for tests. On this two thousand mile, non-stop flight, using only three-fourths of the total horse-power output, the huge craft averaged 237 miles per hour. Curtiss and Seversky have answered this challenge by building small single-place fighters with top speeds of over 300 miles per hour. It is now believed that speed alone is not enough to conquer the modern bombing plane. The Boeing YB-17, which has been aptly

called the "Flying Fortress," is literally a flying machine gun nest, and when equipped with light, long-range cannon, could probably hold off or destroy small fighters armed only with machine guns.

Air Corps officials believe they have found protection against such bombers in a new fighting plane, the Bell XFM-1, which was recently test flown at Wright Field.

The XFM-1 was built by the Bell Aircraft Corporation of Buffalo, N. Y. In purpose it compares with our present fighters, but many radical departures from standard pursuit ship practice have been incorporated into its design. It is a low-winged, five-place monoplane of all metal construction. Power is supplied by an engine mounted pusher fashion on each wing.

The engines used were under development for several years by the Allison Engineering Corporation in conjunction with the Air Corps. They are 12-cylinder, chemically cooled engines of the V type and develop over one thousand horse-power each. Exhaust-driven turbo-super-chargers enable them to operate efficiently at extremely high altitudes.

Each engine drives a three-bladed, constant speed propeller behind the wing. In front of each motor, and forming part of the nacelle, is the compartment of a gunner who operates a flexibly mounted automatic cannon firing explosive shells for long distances. The two wing gunners have an unlimited field of fire to the front, and are unhampered by the propeller blast. The pilot is stationed in the nose of the fuselage proper. The co-pilot is behind the pilot, and the radio man, who acts as the tail gunner, is located between the wing and the tail group, commanding a "gun-blister" on each side of the fuselage. In addition to the two cannon, the ship carries four machine guns and a load of light bombs.

The Bell is perhaps the most complete fighting plane that has ever been built. The central compartment and the wing gunners compartments are electrically heated, and are equipped with inter-communicating telephone sets. The wing gunners can move to the central compartment, while in flight, through a passage in the center-section of the wing. The landing gear and tail wheel are fully retractable, and the wings have flaps for retarding the landing speed. All fuel is carried in compartments in the wings, thus reducing the fire hazard. Radio transmission can be carried on with both motors dead. The power for operating the

landing gear retraction mechanism, starters, lights, radio, and variable pitch propeller device is derived from nine electric motors driven by an auxiliary gasoline engine.

Although performance data on the Bell XFM-1 is being kept a strict secret, its combat ceiling is known to be more than 30,000 feet, and possibly seven or eight miles. Its range has been estimated at 3000 miles and it is said to have a top speed of 300 miles per hour. At any rate, officials have stated that it is capable of overhauling anything in the air, and it is not their habit to exaggerate!

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